



ZPW

Docket No.: 4600-0128PUS1  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Mitsuo SEKINE et al.

Application No.: 10/590,232

Confirmation No.: @@@

Filed: August 22, 2006

Art Unit: N/A

For: ELECTROCHEMICALLY ACTIVE LIGAND  
FOR SEQUENCE-SPECIFIC DETECTION OF  
DOUBLE-STRANDED NUCLEIC ACID  
MOLECULE

Examiner: Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT**  
**(SUBMISSION AFTER FILING OF AN APPLICATION BUT BEFORE FINAL**  
**REJECTION OR NOTICE OF ALLOWANCE OR CONCURRENTLY WITH A RULE**  
**1.114 RCE APPLICATION)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on the PTO-SB08(s), attached hereto.

II. COPIES

☒ a. Copies of cited U.S. patents and patent application publications are not included.  
Copies of foreign patent documents and non-patent literature are included.

☐ b. Some or all of the documents listed on the PTO-SB08 are not enclosed because they were cited in the International Search Report and copies should already be in the PTO file. If copies are needed, please contact the undersigned.

☐ c. REFERENCES PREVIOUSLY CITED OR SUBMITTED - Pursuant to 37 C.F.R. §1.98(d), consideration of information listed on the PTO-SB08 form(s) is requested since any patents, publications, or other information which are listed on the PTO-SB08 form(s) but for which copies are not enclosed herewith, were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Appl. No(s) and U.S. Filing Date

III. CONCISE EXPLANATION OF THE RELEVANCE

(check at least one box)

☒ a. DOCUMENTS IN THE ENGLISH LANGUAGE - The patents, publications, or other information listed on the attached PTO SB08 are in the English language and therefore, do not require a statement of relevancy.

☒ b. DOCUMENTS NOT IN THE ENGLISH LANGUAGE - A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:

**JP 2003-000300 A is discussed on page 2 of the present specification and also see the attached English abstract;**

**JP 2003-83968 A is discussed on page 2 of the present specification and also see the attached English abstract.**

☒ c. ENGLISH LANGUAGE SEARCH REPORT - An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(III)(A)(3).

☒ d. OTHER - The following additional information is provided for the Examiner's consideration.

**Attached is a copy of Form PCT/IB/338 with English translation of the international preliminary report on patentability (Chapter I). Please make this of record in the present application.**

IV. FEES (check one box)

☐ a. This Information Disclosure Statement is being filed concurrently with the filing of a new patent application; therefore, no fee is required.

☐ b. This Information Disclosure Statement is being filed concurrent with the filing of a continuation-in-part, continuation, or divisional patent application; therefore, no fee is required.

☐ c. This Information Disclosure Statement is being filed within three months of the filing date of a national application (37 C.F.R. § 1.97(b)(1)). No fee or statement is required.  
*(This section is not to be used with RCE's.)*

☐ d. This Information Disclosure Statement is being filed within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or statement is required.

☐ e. This Information Disclosure Statement is being filed concurrently with the filing of a Request for Continued Examination under § 1.114 (37 C.F.R. § 1.97(b)(4)). No fee or statement is required.

☒ f. This Information Disclosure Statement is being filed before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or statement is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the statement under 37 C.F.R. § 1.97(e) below, or, if no statement has been made, charge our deposit account for the fee as required by 37 C.F.R. § 1.17(p).

☐ g. This Information Disclosure Statement is being filed before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c)(1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c)(2)).

☐ No statement; therefore, a fee as required by 37 C.F.R. § 1.17(p) is attached.  
or

☐ See the statement below. No fee is required.

V. STATEMENT UNDER 37 C.F.R. § 1.97(e)

(check only one box)

The undersigned hereby states that:

☐ a. **Each item of information contained in the IDS was first cited in any communication from a foreign Patent Office in a counterpart foreign application not more than 30 days prior to the filing of this IDS; or**

☐ b. Each item of information contained in the IDS was first cited in any communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or

☐ c. No item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the IDS.

☐ d. Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was first cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to

the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application and, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

VI. PAYMENT OF FEES (check one box)

- ☐ The required fee is listed on the attached Fee Transmittal.
- ☒ No fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule and charge the appropriate fee to Deposit Account No. 02-2448.


Application No.: 10/590,232

Docket No.: 4600-0128PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Dated: **NOV 30 2006**

Respectfully submitted,

By 

Marc S. Weiner

Registration No.: 32,181

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant

Attachment(s):



PTO-SB08

Documents

Foreign Search Report

Other: Form PCT/IB/338 with English translation of the international preliminary report on patentability (Chapter I)



PTO/SB/08A/B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |   |    |   |                          |                  |
|--|---|----|---|--------------------------|------------------|
| <b>Substitute for form 1449/PTO</b><br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |   |    |   | <b>Complete if Known</b> |                  |
|  |   |    |   | Application Number       | 10/590,232       |
|  |   |    |   | Filing Date              | August 22, 2006  |
|  |   |    |   | First Named Inventor     | Mitsuo SEKINE    |
|  |   |    |   | Art Unit                 | N/A              |
|  |   |    |   | Examiner Name            | Not Yet Assigned |
| Sheet  | 1 | of | 1 | Attorney Docket Number   | 4600-0128PUS1    |

| U.S. PATENT DOCUMENTS |                          |  |                                |  |   |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|                       |                          | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
|                       |                          |  |                                |  |   |

| FOREIGN PATENT DOCUMENTS |                          |   |                                   |  |   |                                     |
|--------------------------|--------------------------|---|-----------------------------------|--|---|-------------------------------------|
| Examiner<br>Initials*    | Cite<br>No. <sup>1</sup> | Foreign Patent Document   | Publication<br>Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>or Relevant Figures Appear | T <sup>6</sup>                      |
|                          |                          | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                                   |  |   |                                     |
|                          | BA                       | JP-2003-000300-A  | 01-07-2003                        |  |   | <input checked="" type="checkbox"/> |
|                          | BB                       | JP-2003-83968-A   | 03-19-2003                        |  |   | <input checked="" type="checkbox"/> |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

| NON PATENT LITERATURE DOCUMENTS |                       |   |  |                |
|---------------------------------|-----------------------|---|--|----------------|
| Examiner Initials               | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |  | T <sup>2</sup> |
|                                 | CA                    | Kohji SEIO et al.; Synthesis and Properties of a Pyrrole-imidazole Polyamide Having a Ferrocene Dicarboxylic Amide Linker; Tetrahedron Letters, 2004, 45 (36); pp. 1-4.   |  |                |
|                                 | CB                    | Markus SCHERER et al.; A bridged pyrrolic ansa-ferrocene. A new type of anion receptor, Chemical Communications, 1998, 1, pp. 85-86.  |  |                |
|                                 | CC                    | Jahyo KANG et al.; Preparation of bis [palladacycles] and application to asymmetric aza-Claisen rearrangement of allylic imidates, Tetrahedron Letters, 2002, 43 (52), 9509-9512.   |  |                |
|                                 | CD                    | Chunhai FAN et al.; Electrochemical interrogation of conformational changes as a reagentless method for the sequence-specific detection of DNA; A. J. Proc. Natl. Acad. Sci., August 5, 2003, Vol. 100, No. 16, pp. 9134-9137.                                  |  |                |
|                                 | CE                    | Milan MRKSICH; Hairpin Peptide Motif. A New Class of Oligopeptides for Sequence-Specific Recognition in the Minor Groove of Double-Helical DNA; J. Am. Chem. Soc., 1994, No. 116, pp. 7983-7988.  |  |                |
|                                 | CF                    | Victor C. RUCKER et al.; Sequence Specific Fluorescence Detection of Double Strand DNA; J. Am. Chem. Soc., 2003, No. 125, pp. 1195-1202.  |  |                |
|                                 | CG                    | Yong-Dong WANG et al.; DNA crosslinking and biological activity of a hairpin polyamide-chlorambucil conjugate; Nucleic Acids Research, Vol. 31, No. 4, 2003.  |  |                |
|                                 | CH                    | Shane FOISTER et al.; Shape Selective Recognition of T-A Base Pairs by Hairpin Polyamides Containing N-Terminal 3-Methoxy (and 3-Chloro) Thiophene Residues; Bioorganic & Medicinal Chemistry, No. 11, 2003, pp. 4333-4340.                                     |  |                |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

|                       |  |                    |  |
|-----------------------|--|--------------------|--|
| Examiner<br>Signature |  | Date<br>Considered |  |
|-----------------------|--|--------------------|--|